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Abstract

Objective: Current knowledge of developmental disorders in motor skills of school children suggest potential negative impacts on the development of the personality of the child in the mental, social psychological and behavioural areas and also in the area of competence at school. Very little is known about how an insufficient level of motor skills of a child can limit his/her physical activity. This work was performed to discover whether developmentally determined motor deficit in children of older school age is a risk factor for lower physical activity (PA) and whether the attention of the child has a mediation function in the relationship between the level of motor skills and his/her physical activity.

Methods: The research was based on analytical-descriptive examination of the motor skills of children, their physical activity in weekly regimes and the attention level, with subsequent comparison of children with a motor deficit (MD) and children without MD, through correlation analysis and analysis of the mediative effect of attention according to Baron and Kenny (1986). Child motor skills were evaluated using the MABC-2 test battery (Henderson et al., 2007), PA in the weekly regime was monitored using accelerometers and a written record of PA, and attention was diagnosed by the d2 test (Brickenkamp, Zillmer, 2000) and the Numeric Square (Jirásek, 1975).

Results and Discussion: Children with MD exhibited lower PA in a number of indicators compared to children without MD, including lower PA at higher to high intensities, overall time spent in endurance physical activities and a greater number of days in the weekly regime in which they did not meet the health recommendations for magnitude of energy expenditure and number of steps taken. Lower PA on the weekends was apparent for all the children, independent of the level of motor skills and gender. In addition to some differences in PA among children with MD and without MD, findings of significant correlations between indicators of the level of motor coordination, especially general motor skills, and the indicators of PA, such as daily energy expenditure and daily period spent at PA with high

intensity, supported the hypothesis that developmentally determined motor deficit could be a risk factor for lower PA in a child. The work also revealed that participation of children in physical activities with greater intensity can be limited by a lower level of general motor skills connected with the eye-body and eye-arm systems, with simultaneous negative contribution of the concentration attention of the child.

Key words: motor skills, energy expenditure, steps, motor deficit, general motor skills, balance, attention, child.

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